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airflow resistance. In our experience the latter for practical purposes was too negligible to be measured, becoming totally obscured by the enormously increased elastic resistance. The maximum voluntary ventilation remains remarkably well preserved in these circumstances, and at 90% and 93% of predicted value was within normal limits on each occasion it was measured. Whether the arterial blood oxygen desaturation is the result of abnormalities in ventilation/perfusion ratios for various zones of the lung, with a right to left shunt, or is purely the result of a reduction in membrane diffusion, or (as seems most likely) is a product of all these factors remains uncertain. It represents one more question, as yet unanswered, in this unusual but interesting condition.

The authors acknowledge their indebtedness to Dr. J. A. L. Gilbert for permission to study this patient.

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Adynamic Ileus During Psychoactive Medication:

A Report of Three Fatal and Five Severe Cases

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THE parasympatholytic effects of the antidepressant drugs are well known. In addition to their sympatholytic properties, the phenothiazine drugs have also been reported to cause constipation and dryness of the mouth through an anticholinergic effect. The combination of phenothiazines with antidepressant and antiparkinsonian agents is especially likely to enhance this anticholinergic effect. In a few instances, this combination of drugs has led to serious consequences, for example, intestinal paralysis and/or paralytic ileus. In this paper, eight cases with serious consequences from this anticholinergic effect on the gastrointestinal system will be reported. Of the total sample, the first three had a fatal outcome, while the other five were detected early enough to be successfully treated.

DESCRIPTION OF CASES

CASE 1.—A 55-year-old woman with depression was in hospital over a seven-month period. She was treated with imipramine, 150 mg., and chlorpromazine, 250 mg. (average) daily. After a period of chronic constipation, the patient suddenly complained of diffuse abdominal cramps. Physical examination revealed abdominal distension. Severe shock rapidly developed; the patient vomited feces, and soon died. Autopsy revealed fecal impaction, dilatation of the intestines, aspiration of stomach contents, and pulmonary edema.

CASE 2.—A 51-year-old woman with schizophrenia was in hospital over a six-month period. She was treated with levomepromazine, 400 mg., and trihexyphenidyl hydrochloride, 4 mg. (average) daily. After a period of chronic constipation, the patient developed abdominal cramps and pain. Physical examination revealed abdominal distension and fecal impaction. The patient vomited feces, went into shock and died. Autopsy revealed acute colitis and peritonitis, secondary to a large tumour-like fecal mass in the rectum, a fecaloma.

CASE 3.—A 49-year-old woman with schizophrenia was in hospital over a four-month period. She was treated with chlorpromazine, 1600 mg., and trihexyphenidyl hydrochloride, 6 mg. (average) daily. After a period of chronic constipation, acute diarrhea developed following the enemas that were given. Prior to death, she became extremely dehydrated. Physical examination revealed fecal impaction. The patient went into fatal shock. Autopsy was not performed.

CASE 4.—A 55-year-old man with depression was in hospital over a nine-month period. He was treated

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This study was supported by Public Health Service Research Grant MH 05202 from the U.S. Department of Health, Education and Welfare.
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with thioridazine hydrochloride, 400 mg., imipramine, 225 mg., and trihexyphenidyl hydrochloride, 12 mg. (average) daily. After a period of chronic constipation, the patient became increasingly confused. Physical examination revealed abdominal distension and fecal impaction. Disimpaction, enemas and change of medication were successful.

CASE 5.—A 53-year-old woman with a manic-depressive psychosis was in hospital over a four-year period. She was treated with levomepromazine, 1200 mg. (average) daily for one week before her paralytic ileus was diagnosed. Before levomepromazine treatment she was taking various phenothiazines including chlorpromazine and perphenazine, and antidepressants including imipramine and phenelzine. Physical examination revealed abdominal distension and fecal impaction. Plain film radiographs of the abdomen confirmed the diagnosis of paralytic ileus. Disimpaction, nasogastric tube suction, saline infusion, further enemas and change of medication were applied successfully.

CASE 6.—A 50-year-old woman with schizophrenia was in hospital over a 33-year period. She was treated with trifluoperazine hydrochloride, 30 mg., and trihexyphenidyl hydrochloride, 60 mg. (average) daily for two years. After a period of chronic constipation, transitory abdominal cramps developed. Physical examination revealed abdominal distension and fecal impaction. Consecutive radiographs showed a megacolon, secondary to fecaloma. Disimpaction, enemas and change of medication were successful in relieving her bowel condition.

CASE 7.—A 59-year-old woman with depression was in hospital over a three-month period. She was treated with imipramine, 225 mg., levomepromazine, 300 mg., and benztropine methanesulfonate, 4 mg. (average) daily. After a period of chronic constipation, the patient complained of diffuse pain in her abdomen. Physical examination revealed abdominal distension, fecal impaction and urinary retention. At the time of the physical examination, the patient vomited feces and went into a stuporous state. Disimpaction, catheterization, enemas, saline infusion and change of medication were successful.

CASE 8.—A 30-year-old man with schizophrenia was in hospital over a 10-year period. He was treated with thioridazine hydrochloride, 1200 mg., and trihexyphenidyl hydrochloride, 6 mg. (average) daily for 10 days. Prior to this he was on prochlorperazine, 75 mg. daily, for two years. After a period of chronic constipation, abdominal pain with infrequent vomiting developed. Physical examination confirmed the diagnosis of paralytic ileus. Disimpaction, enemas, antibiotics, saline infusion and change of medication were used with success.

DISCUSSION

Psychiatric patients in hospitals are known to be subject to a higher percentage of bowel "problems" than the non-psychiatric population. Inactivity, deterioration, negligence in responding to the desire to defecate and parasympathetic hypofunction have been suggested as causing chronic constipation, fecal impaction, megacolon and megarectum. Added to this, the parasympatholytic effect of antipsychotic phenothiazines, tricyclic antidepressant compounds, and antiparkinsonian drugs or their combinations may result in serious complications. If the condition is discovered early and promptly treated, it usually responds to a change of medication and other appropriate treatment.[1-5]

SUMMARY

Eight cases of chronic constipation with fecal impaction are reported. All patients were treated with either a phenothiazine, a tricyclic antidepressant, an antiparkinsonian drug or their combination. Five patients were successfully treated. In the first three cases recognition of the condition was too late and a fatal outcome could not be prevented.

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